# 12.1" 4 wire Resistive Touch Screen / Resistive Touch Panel (RTP) TS121A4BP022-AA1

## 1. Product Overview

| Parameter | Specification |
|---|---|
| Part Number | TS121A4BP022-AA1 |
| Touch Technology | 4 wires Resistive Touch Screen / Resistive Touch Panel (RTP) |
| Input Methods | Finger, Gloved Hand, Passive Stylus |
| Surface Treatment | Matte |
| Glass Thickness | 1.3mm / 1.8mm (Customizable) |
| Agency Approvals | CE, FCC, RoHS Compliant |

## 2. Mechanical Specifications

| Parameter | Specification |
|---|---|
| Screen Diagonal | 12.1" |
| Aspect Ratio | 4:3 |
| Overall Dimensions | Length: 261.00 mm,Width: 199.00 mm |
| View Area | Length: 246.50 mm,Width: 187.50 mm |
| Active Area | Length: 244.50 mm,Width: 185.50 mm |
| Sensor Construction | 2 Layers |
| Surface Hardness | ≥7H (Mohs Scale) |
| FPC Position | Short Side - Left Middle |
| Connector Pitch | pitch(1.0) |
| Sensor Thickness | 1.80 mm |
| Total Thickness | 2.10 mm |

## 3. Touch Performance

| Parameter | Specification |
|---|---|
| Activation Force | 45g ~ 110g |
| Linearity Error | ≤1.5% |
| Response Time | ≤10ms |
| Surface Resistance | X-axis: 300Ω ~ 900Ω; Y-axis: 200Ω ~ 800Ω |
| Operating Life | Finger: >5M touches; Pen: >100K characters |
| Light Transmission | ≥80% (ASTM D1003) |

## 4. Environmental Specifications

| Parameter | Specification |
|---|---|
| Operating Temperature | -20°C to +70°C (No condensation) |
| Storage Temperature | -30°C to +80°C (No condensation) |
| Operating Humidity | 10% ~ 90% RH (at 60°C) |
| Storage Humidity | 10% ~ 90% RH (at 40°C) |
| Chemical Resistance | Alcohol, Gasoline, Ammonia, Lipstick, etc. |

## 5. Electrical Characteristics

| Parameter | Specification |
|---|---|
| Operating Voltage | DC 3V ~ 7V (Typical 5V) |
| Current Consumption | ≤25mA (Typical) |

| | |
|---|---|
| Interface Options | USB 2.0, RS-232 (9600 baud) |
| ESD Protection | ±10kV (Air Discharge) |
| Isolation Resistance | >20MΩ (DC 25V) |

6. Reliability Testing

| Test | Condition | Standard |
|---|---|---|
| High Temperature | +70°C, 240 hours | IEC 60068-2-2 |
| Low Temperature | -40°C, 240 hours | IEC 60068-2-1 |
| Thermal Cycling | -40°C ↔ +70°C, 10 cycles | IEC 60068-2-14 |
| Temperature Shock | Air-to-air, 5-minute transition | MIL-STD-810G |

7. Software & Compatibility

| OS | Support Details |
|---|---|
| Windows | Dos, Windows ME,Windows 95,Windows 98,Windows NT4.0,Windows XP, Windows 2000,Windows 7,Windows 8,Windows 10 (32/64-bit), WHQL Certified |
| Linux | Kernel 2.6+, HID Compliant |
| Mac OS | 10.12+, Plug-and-Play |
| Android | 4.4+ (USB Host Mode) |
| Others | DOS, QNX, VxWorks |

8. Optional Customizations

| Option | Description |
|---|---|
| Surface Treatments | Anti-Newton Ring, Anti-Glare, Anti-Fingerprint |
| Connector Types | ZIF, FPC, USB, RS-232 |
| Special Shapes | Custom designs available |